

**Statement of**

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**Before the**

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House of Representatives  
United States Congress**

**“The Investigation of the World Trade Center Collapse: Findings,  
Recommendations, and Next Steps”**

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Chairman Boehlert and members of the House Committee on Science: My name is Glenn Corbett. I want to thank you for the opportunity to testify before you concerning NIST and the World Trade Center disaster investigation. Before I discuss the investigation, I would like first extend my thanks to you, Chairman Boehlert, and the House Committee on Science for initiating the creation of the National Construction Safety Team Act and shepherding it through Congress to final approval by President Bush. The American public is the beneficiary of this critical legislation and will reap the fruits of your labors through the saving of lives and construction of safer buildings.

Additionally, I must also note that although I am a member of the Federal Advisory Committee to the National Construction Safety Team, I do not speak on the committee's behalf. My testimony represents only my opinions. I recommend that the Committee on Science review the annual reports of the NCST Advisory Committee for details on their perspective.

Over three years has passed since NIST began its investigation into the World Trade Center disaster. We have now come to the conclusion of this \$16 million effort search for answers about what happened in the twin towers. The investigation has taken much longer than anticipated, including the fact that the World Trade Center (building) 7 investigation will likely not be completed next summer.

Although NIST has done quit a bit of work and has amassed many thousands of pages of useful research, I feel that the investigation has fallen far short of what is needed. From the beginning, I had hoped for a true investigation with a tight set of specific recommendations at the conclusion that could immediately be passed to our national

code-writing groups and trade associations. Instead of passing a blazing torch of detailed recommendations, this lengthy marathon race has resulted in NIST giving our model code-writing groups a handful of flickering embers that although are generally good in principle are entirely too vague. The model code-writing groups now have to wait even longer while NIST hires an outside organization to prepare a set of recommendations that can actually be assimilated into our construction codes.

During the course of the WTC investigation, I have had serious concerns about some of the findings and conclusions that NIST has drawn. Other individuals, including some people on the federal advisory committee, have also had concerns. While this hearing is not the appropriate place to debate technical issues, I would suggest that a more formal mechanism be developed to officially address comments from the public. Such a protocol should include the technical basis for which NIST rejects or accepts the content a public comment.

Overall, I have been disappointed by the lack of aggressiveness that has characterized not only the World Trade Center investigation but the Rhode Island Station Nightclub investigation as well. Instead of a “gumshoe” inquiry that left no stone unturned, I believe the investigations were treated more like research projects in which they waited for information to flow to them. In both investigations, they were reluctant to use the subpoena power given to them under the NCST Act. To some extent, the lack of assertiveness was the likely the result of the legal opinions given to NIST by staff attorneys.

Recently, this situation was greatly amplified by NIST’s reluctance to respond to hurricanes Katrina and Rita under the banner of the NCST Act. I suggested to NIST that

they assemble a NCST team for Katrina before it struck the Gulf Coast. They actually sent a handful of people a week after Katrina hit, only recently sending a larger group of researchers to the area. Curiously, they have decided not to respond under the NCST Act.

To their credit, NIST has brought many talented people to the WTC investigation. They have expended a tremendous amount of effort, compiled a great deal of technical data, pushed the technical limits of computer models, and identified the general areas of concern where improvement in safety regulations and practice are called for. They are to be commended for their extraordinary research efforts, given the immensity of the project.

With respect to the 30 recommendations that NIST has developed – despite being vague, they are areas of significant importance - I feel the following particular ones deserve greater attention. These recommendations concern enhanced structural fire resistance; redundancy for fire protection systems in tall buildings; enhanced egress capabilities including dealing with stairwell counterflow, remoteness of exits, and full building evacuation capacity; hardened elevators for egress; and robust communications capabilities for emergency responders.

Where do we go from here with regard to the World Trade Center? The ball is in NIST's court, and it is up to them (with their contractor) to quickly whittle the desirable but too general recommendations down into well-defined code language that can be quickly moved through the model code review process. I strongly encourage them to be bold, to use their best engineering judgment, and come up with clear and concise code language. High-rise safety is held in the balance.

When I look to the future of the NCST Act, sadly I find it necessary to recommend that serious consideration be given to finding a new agency to implement the Act. I don't think that NIST is the right place for the NCST. Their non-aggressiveness, their absence of investigative instinct, and the palatable lack of interest they have shown in the Act have brought me to this conclusion. NIST is an organization of exceptional scientists and engineers, not detectives.

Short of creating an entirely new National Construction Safety Team Board, I would recommend that serious consideration be given to moving the NCST to the U.S. Chemical Safety and Hazard Investigation Board. They are a close fit: they investigate explosions and chemical disasters in and around structures. They deal with many of the same code-writing organizations that NIST deals with, including some of the organizations represented on this panel today. Most importantly, they are solely an investigative agency that issues recommendations. Perhaps their purview could be expanded to include the NCST Act.

In conclusion I want to again thank you, Chairman Boehlert, and the House Committee on Science for taking the leadership role in creating the NCST Act. The fact that it has drawn the attention of many people and organizations from the safety and construction fields is a testament to its importance.